

21415-0012US1.txt
SEQUENCE LISTING

<110> Judith A. Clements

<120> Method for Detecting the Presence of Risk of Prostate Cancer by Detecting Products of PSA OR KLK2

<130> 21415-0012US1

<140> US 10/511,988

<141> 2004-10-21

<150> PCT/AU03/00454

<151> 2003-04-16

<150> AU PS1870/02

<151> 2002-04-22

<160> 43

<170> PatentIn version 3.2

<210> 1

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<220>

<221> CDS

<222> (38)..(577)

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Phe Leu Thr Leu Ser Val Thr Trp Ile Gly Ala Ala Pro Leu Ile Leu
10 15 20

tct cgg att gtg gga ggc tgg gag tgc gag aag cat tcc caa ccc tgg 151
Ser Arg Ile Val Gly Gly Trp Glu Cys Glu Lys His Ser Gln Pro Trp
25 30 35

cag gtg ctt gtg gcc tct cgt ggc agg gca gtc tgc ggc ggt gtt ctg 199
Gln Val Leu Val Ala Ser Arg Gly Arg Ala Val Cys Gly Gly Val Leu
40 45 50

gtg cac ccc cag tgg gtc ctc aca gct gcc cac tgc atc agg aac aaa 247
Val His Pro Gln Trp Val Leu Thr Ala Ala His Cys Ile Arg Asn Lys
55 60 65 70

agc gtg atc ttg ctg ggt cgg cac agc ctg ttt cat cct gaa gac aca 295
Ser Val Ile Leu Leu Gly Arg His Ser Leu Phe His Pro Glu Asp Thr
75 80 85

ggc cag gta ttt cag gtc agc cac agc ttc cca cac ccg ctc tac gat 343
Gly Gln Val Phe Gln Val Ser His Ser Phe Pro His Pro Leu Tyr Asp
90 95 100

atg agc ctc ctg aag aat cga ttc ctc agg cca ggt gat gac tcc agc 391
Met Ser Leu Leu Lys Asn Arg Phe Leu Arg Pro Gly Asp Asp Ser Ser
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gct gtg aag gtc atg gac ctg ccc acc cag gag cca gca ctg ggg acc Ala Val Lys Val Met Asp Leu Pro Thr Gln Glu Pro Ala Leu Gly Thr 135 140 145 150	487
acc tgc tac gcc tca ggc tgg ggc agc att gaa cca gag gag tgt acg Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile Glu Pro Glu Glu Cys Thr 155 160 165	535
cct ggg cca gat ggt gca gcc ggg agc cca gat gcc tgg gtc Pro Gly Pro Asp Gly Ala Ala Gly Ser Pro Asp Ala Trp Val 170 175 180	577
tgagggagga ggggacagga ctcttggtc tgagggagga gggccaagga accaggtggg	637
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tactgg	1603

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20 25 30

Lys His Ser Gln Pro Trp Gln Val Leu Val Ala Ser Arg Gly Arg Ala
35 40 45

Val Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala
50 55 60

His Cys Ile Arg Asn Lys Ser Val Ile Leu Leu Gly Arg His Ser Leu
65 70 75 80

Phe His Pro Glu Asp Thr Gly Gln Val Phe Gln Val Ser His Ser Phe
85 90 95

Pro His Pro Leu Tyr Asp Met Ser Leu Leu Lys Asn Arg Phe Leu Arg
100 105 110

Pro Gly Asp Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu
115 120 125

Pro Ala Glu Leu Thr Asp Ala Val Lys Val Met Asp Leu Pro Thr Gln
130 135 140

Glu Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile
145 150 155 160

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Asp Ala Trp Val
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1 5 10 15

48

cat tcc caa ccc tgg cag gtg ctt gtg gcc tct cgt ggc agg gca gtc
His Ser Gln Pro Trp Gln Val Leu Val Ala Ser Arg Gly Arg Ala Val
Page 3

96

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tgc ggc ggt gtt ctg gtg cac ccc cag tgg gtc ctc aca gct gcc cac Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala His 35 40 45			144
tgc atc agg aac aaa agc gtg atc ttg ctg ggt cgg cac agc ctg ttt Cys Ile Arg Asn Lys Ser Val Ile Leu Leu Gly Arg His Ser Leu Phe 50 55 60			192
cat cct gaa gac aca ggc cag gta ttt cag gtc agc cac agc ttc cca His Pro Glu Asp Thr Gly Gln Val Phe Gln Val Ser His Ser Phe Pro 65 70 75 80			240
cac ccg ctc tac gat atg agc ctc ctg aag aat cga ttc ctc agg cca His Pro Leu Tyr Asp Met Ser Leu Leu Lys Asn Arg Phe Leu Arg Pro 85 90 95			288
ggt gat gac tcc agc cac gac ctc atg ctg ctc cgc ctg tca gag cct Gly Asp Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu Pro 100 105 110			336
gcc gag ctc acg gat gct gtg aag gtc atg gac ctg ccc acc cag gag Ala Glu Leu Thr Asp Ala Val Lys Val Met Asp Leu Pro Thr Gln Glu 115 120 125			384
cca gca ctg ggg acc acc tgc tac gcc tca ggc tgg ggc agc att gaa Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile Glu 130 135 140			432
cca gag gag tgt acg cct ggg cca gat ggt gca gcc ggg agc cca gat Pro Glu Glu Cys Thr Pro Gly Pro Asp Gly Ala Ala Gly Ser Pro Asp 145 150 155 160			480
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 20 25 30

Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Ile Arg Asn Lys Ser Val Ile Leu Leu Gly Arg His Ser Leu Phe
 50 55 60

His Pro Glu Asp Thr Gly Gln Val Phe Gln Val Ser His Ser Phe Pro
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Leu	Met	Leu	Leu	Arg	Leu	Ser	Glu	Pro	Ala	Glu	Leu	Thr	Asp	Ala	Val		
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aag	gtc	atg	gac	ctg	ccc	acc	cag	gag	cca	gca	ctg	ggg	acc	acc	tgc		384
Lys	Val	Met	Asp	Leu	Pro	Thr	Gln	Glu	Pro	Ala	Leu	Gly	Thr	Thr	Cys		
		115					120					125					
tac	gcc	tca	ggc	tgg	ggc	agc	att	gaa	cca	gag	gag	tgt	acg	cct	ggg		432
Tyr	Ala	Ser	Gly	Trp	Gly	Ser	Ile	Glu	Pro	Glu	Glu	Cys	Thr	Pro	Gly		
	130					135					140						
cca	gat	ggt	gca	gcc	ggg	agc	cca	gat	gcc	tgg	gtc	tga					471
Pro	Asp	Gly	Ala	Ala	Gly	Ser	Pro	Asp	Ala	Trp	Val						
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Pro	Gln	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Ile	Arg	Asn	Lys	Ser	Val		
		35					40					45					

Ile	Leu	Leu	Gly	Arg	His	Ser	Leu	Phe	His	Pro	Glu	Asp	Thr	Gly	Gln		
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			85						90					95			

Leu	Met	Leu	Leu	Arg	Leu	Ser	Glu	Pro	Ala	Glu	Leu	Thr	Asp	Ala	Val		
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Lys	Val	Met	Asp	Leu	Pro	Thr	Gln	Glu	Pro	Ala	Leu	Gly	Thr	Thr	Cys		
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Tyr	Ala	Ser	Gly	Trp	Gly	Ser	Ile	Glu	Pro	Glu	Glu	Cys	Thr	Pro	Gly		
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 15 20 25

tgg gag tgt gag aag cat tcc caa ccc tgg cag gtg gct gtg tac agt 148
 Trp Glu Cys Glu Lys His Ser Gln Pro Trp Gln Val Ala Val Tyr Ser
 30 35 40

cat gga tgg gca cac tgt ggg ggt gtc ctg gtg cac ccc cag tgg gtg 196
 His Gly Trp Ala His Cys Gly Gly Val Leu Val His Pro Gln Trp Val
 45 50 55 60

ctc aca gct gcc cat tgc cta aag aag aat agc cag gtc tgg ctg ggt 244
 Leu Thr Ala Ala His Cys Leu Lys Lys Asn Ser Gln Val Trp Leu Gly
 65 70 75

cgg cac aac ctg ttt gag cct gaa gac aca ggc cag agg gtc cct gtc 292
 Arg His Asn Leu Phe Glu Pro Glu Asp Thr Gly Gln Arg Val Pro Val
 80 85 90

agc cac agc ttc cca cac ccg ctc tac aat atg agc ctt ctg aag cat 340
 Ser His Ser Phe Pro His Pro Leu Tyr Asn Met Ser Leu Leu Lys His
 95 100 105

caa agc ctt aga cca gat gaa gac tcc agc cat gac ctc atg ctg ctc 388
 Gln Ser Leu Arg Pro Asp Glu Asp Ser Ser His Asp Leu Met Leu Leu
 110 115 120

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 Arg Leu Ser Glu Pro Ala Lys Ile Thr Asp Val Val Lys Val Leu Gly
 125 130 135 140

ctg ccc acc cag gag cca gca ctg ggg acc acc tgc tac gcc tca ggc 484
 Leu Pro Thr Gln Glu Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly
 145 150 155

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 Trp Gly Ser Ile Glu Pro Glu Glu Phe Leu Arg Pro Arg Ser Leu Gln
 160 165 170

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 Cys Val Ser Leu His Leu Leu Ser Asn Asp Met Cys Ala Arg Ala Tyr
 175 180 185

tct gag aag gtg aca gag ttc atg ttg tgt gct ggg ctc tgg aca ggt 628
 Ser Glu Lys Val Thr Glu Phe Met Leu Cys Ala Gly Leu Trp Thr Gly
 190 195 200

ggt aaa gac act tgt ggg gtg agt cat ccc tac tcc caa cat ctg gag 676
 Gly Lys Asp Thr Cys Gly Val Ser His Pro Tyr Ser Gln His Leu Glu
 205 210 215 220

ggg aaa ggg tgattctggg ggtccacttg tctgtaatgg tgtgcttcaa 725
 Gly Lys Gly

ggtatcacat catggggccc tgagccatgt gccctgcctg aaaagcctgc tgtgtacacc 785

aagggtggtgc attaccggaa gtggatcaag gacaccatcg cagccaaccc ctgagtggcc 845

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35 40 45

His Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala
50 55 60

His Cys Leu Lys Lys Asn Ser Gln Val Trp Leu Gly Arg His Asn Leu
65 70 75 80

Phe Glu Pro Glu Asp Thr Gly Gln Arg Val Pro Val Ser His Ser Phe
85 90 95

Pro His Pro Leu Tyr Asn Met Ser Leu Leu Lys His Gln Ser Leu Arg
100 105 110

Pro Asp Glu Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu
115 120 125

Pro Ala Lys Ile Thr Asp Val Val Lys Val Leu Gly Leu Pro Thr Gln
130 135 140

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Glu Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile
145 150 155 160

Glu Pro Glu Glu Phe Leu Arg Pro Arg Ser Leu Gln Cys Val Ser Leu
165 170 175

His Leu Leu Ser Asn Asp Met Cys Ala Arg Ala Tyr Ser Glu Lys Val
180 185 190

Thr Glu Phe Met Leu Cys Ala Gly Leu Trp Thr Gly Gly Lys Asp Thr
195 200 205

Cys Gly Val Ser His Pro Tyr Ser Gln His Leu Glu Gly Lys Gly
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1 5 10 15

cat tcc caa ccc tgg cag gtg gct gtg tac agt cat gga tgg gca cac 96
His Ser Gln Pro Trp Gln Val Ala Val Tyr Ser His Gly Trp Ala His
20 25 30

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Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala His
35 40 45

tgc cta aag aag aat agc cag gtc tgg ctg ggt cgg cac aac ctg ttt 192
Cys Leu Lys Lys Asn Ser Gln Val Trp Leu Gly Arg His Asn Leu Phe
50 55 60

gag cct gaa gac aca ggc cag agg gtc cct gtc agc cac agc ttc cca 240
Glu Pro Glu Asp Thr Gly Gln Arg Val Pro Val Ser His Ser Phe Pro
65 70 75 80

cac ccg ctc tac aat atg agc ctt ctg aag cat caa agc ctt aga cca 288
His Pro Leu Tyr Asn Met Ser Leu Leu Lys His Gln Ser Leu Arg Pro
85 90 95

gat gaa gac tcc agc cat gac ctc atg ctg ctc cgc ctg tca gag cct 336
Asp Glu Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu Pro
100 105 110

gcc aag atc aca gat gtt gtg aag gtc ctg ggc ctg ccc acc cag gag 384
Ala Lys Ile Thr Asp Val Val Lys Val Leu Gly Leu Pro Thr Gln Glu
Page 10

115	120	125	
cca gca ctg ggg acc acc tgc tac gcc tca ggc tgg ggc agc atc gaa Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile Glu 130 135 140			432
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gag ttc atg ttg tgt gct ggg ctc tgg aca ggt ggt aaa gac act tgt Glu Phe Met Leu Cys Ala Gly Leu Trp Thr Gly Gly Lys Asp Thr Cys 180 185 190			576
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Cys Gly Gly Val Leu Val His Pro Gln Trp Val Leu Thr Ala Ala His
 35 40 45

Cys Leu Lys Lys Asn Ser Gln Val Trp Leu Gly Arg His Asn Leu Phe
 50 55 60

Glu Pro Glu Asp Thr Gly Gln Arg Val Pro Val Ser His Ser Phe Pro
 65 70 75 80

His Pro Leu Tyr Asn Met Ser Leu Leu Lys His Gln Ser Leu Arg Pro
 85 90 95

Asp Glu Asp Ser Ser His Asp Leu Met Leu Leu Arg Leu Ser Glu Pro
 100 105 110

Ala Lys Ile Thr Asp Val Val Lys Val Leu Gly Leu Pro Thr Gln Glu
 115 120 125

Pro Ala Leu Gly Thr Thr Cys Tyr Ala Ser Gly Trp Gly Ser Ile Glu
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130

135

140

Pro Glu Glu Phe Leu Arg Pro Arg Ser Leu Gln Cys Val Ser Leu His
145 150 155 160

Leu Leu Ser Asn Asp Met Cys Ala Arg Ala Tyr Ser Glu Lys Val Thr
165 170 175

Glu Phe Met Leu Cys Ala Gly Leu Trp Thr Gly Gly Lys Asp Thr Cys
180 185 190

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gct gtg tac agt cat gga tgg gca cac tgt ggg ggt gtc ctg gtg cac 96
Ala Val Tyr Ser His Gly Trp Ala His Cys Gly Gly Val Leu Val His
20 25 30

ccc cag tgg gtg ctc aca gct gcc cat tgc cta aag aag aat agc cag 144
Pro Gln Trp Val Leu Thr Ala Ala His Cys Leu Lys Lys Asn Ser Gln
35 40 45

gtc tgg ctg ggt cgg cac aac ctg ttt gag cct gaa gac aca ggc cag 192
Val Trp Leu Gly Arg His Asn Leu Phe Glu Pro Gln Asp Thr Gly Gln
50 55 60

agg gtc cct gtc agc cac agc ttc cca cac ccg ctc tac aat atg agc 240
Arg Val Pro Val Ser His Ser Phe Pro His Pro Leu Tyr Asn Met Ser
65 70 75 80

ctt ctg aag cat caa agc ctt aga cca gat gaa gac tcc agc cat gac 288
Leu Leu Lys His Gln Ser Leu Arg Pro Asp Glu Asp Ser Ser His Asp
85 90 95

ctc atg ctg ctc cgc ctg tca gag cct gcc aag atc aca gat gtt gtg 336
Leu Met Leu Leu Arg Leu Ser Glu Pro Ala Lys Ile Thr Asp Val Val
100 105 110

aag gtc ctg ggc ctg ccc acc cag gag cca gca ctg ggg acc acc tgc 384
Lys Val Leu Gly Leu Pro Thr Gln Glu Pro Ala Leu Gly Thr Thr Cys
115 120 125

tac gcc tca ggc tgg ggc agc atc gaa cca gag gag ttc ttg cgc ccc 432

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Tyr	Ala	Ser	Gly	Trp	Gly	Ser	Ile	Glu	Pro	Glu	Glu	Phe	Leu	Arg	Pro		
130						135					140						
agg	agt	ctt	cag	tgt	gtg	agc	ctc	cat	ctc	ctg	tcc	aat	gac	atg	tgt	480	
Arg	Ser	Leu	Gln	Cys	Val	Ser	Leu	His	Leu	Leu	Ser	Asn	Asp	Met	Cys		
145					150					155					160		
gct	aga	gct	tac	tct	gag	aag	gtg	aca	gag	ttc	atg	ttg	tgt	gct	ggg	528	
Ala	Arg	Ala	Tyr	Ser	Glu	Lys	Val	Thr	Glu	Phe	Met	Leu	Cys	Ala	Gly		
				165					170					175			
ctc	tgg	aca	ggt	ggt	aaa	gac	act	tgt	ggg	gtg	agt	cat	ccc	tac	tcc	576	
Leu	Trp	Thr	Gly	Gly	Lys	Asp	Thr	Cys	Gly	Val	Ser	His	Pro	Tyr	Ser		
			180					185					190				
caa	cat	ctg	gag	ggg	aaa	ggg	tga									600	
Gln	His	Leu	Glu	Gly	Lys	Gly											
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<400> 14

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Ala	Val	Tyr	Ser	His	Gly	Trp	Ala	His	Cys	Gly	Gly	Val	Leu	Val	His
			20					25					30		
Pro	Gln	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Leu	Lys	Lys	Asn	Ser	Gln
		35					40					45			
Val	Trp	Leu	Gly	Arg	His	Asn	Leu	Phe	Glu	Pro	Glu	Asp	Thr	Gly	Gln
	50					55					60				
Arg	Val	Pro	Val	Ser	His	Ser	Phe	Pro	His	Pro	Leu	Tyr	Asn	Met	Ser
65					70				75					80	
Leu	Leu	Lys	His	Gln	Ser	Leu	Arg	Pro	Asp	Glu	Asp	Ser	Ser	His	Asp
			85						90					95	
Leu	Met	Leu	Leu	Arg	Leu	Ser	Glu	Pro	Ala	Lys	Ile	Thr	Asp	Val	Val
			100					105					110		
Lys	Val	Leu	Gly	Leu	Pro	Thr	Gln	Glu	Pro	Ala	Leu	Gly	Thr	Thr	Cys
		115					120					125			
Tyr	Ala	Ser	Gly	Trp	Gly	Ser	Ile	Glu	Pro	Glu	Glu	Phe	Leu	Arg	Pro
	130					135					140				

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Arg Ser Leu Gln Cys Val Ser Leu His Leu Leu Ser Asn Asp Met Cys
145 150 155 160

Ala Arg Ala Tyr Ser Glu Lys Val Thr Glu Phe Met Leu Cys Ala Gly
165 170 175

Leu Trp Thr Gly Gly Lys Asp Thr Cys Gly Val Ser His Pro Tyr Ser
180 185 190

Gln His Leu Glu Gly Lys Gly
195

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22

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<210> 25

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21

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 <400> 42
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